Unified State Laboratory

Department of Agriculture and Food

Department of Environmental Quality

Department of Health & Office of the Medical Examiner

Department of Public Safety

April 2006

PROJECT DESCRIPTION

1. **Project Detail -**The current proposal creates a "Unified State Laboratory System" by uniting the laboratories of the Department of Agriculture and Food (DAF), Department of Environmental Quality (DEQ), Department of Health (DOH) and Office of the Medical Examiner (OME), and the Department of Public Safety (DPS) in a single facility. The proposed new facility will contain modern safety and engineering features currently lacking in each of the separate laboratories. These modern features include biological safety cabinets, externally exhausted fume hoods, negative air pressure laboratory spaces, flexible "open campus" processing areas, and dedicated Bio-Safety facilities for testing potentially dangerous agents such as the SARS virus and anthrax. No existing facility will be demolished or remodeled as part of this project.

2. **Area of New Construction –** As this is a new facility request, the building size estimate was obtained by ascertaining current and projected needs for each of the four involved Agencies.

3. **Programs and Services to be Offered –** Some of the laboratory services offered in the new USL are as follows:

   - Forensic Chemistry, Biology, Toxicology and Pathology
   - Clinical Microbiology and Environmental Chemistry
   - Mercury in Fish Testing
   - Impression Evidence and Crime Scene Investigation
   - Firearms and Tool Marks
   - Agricultural Chemistry, Dairy Microbiology and Plant Seed Testing
   - Metrology and Motor Fuels
   - Laboratory Certification & Improvement

   While several laboratories will see increases in testing volume to meet current and projected needs, the only new services offered in the new facility will be in radiological chemistry. Due to severe space restraints, radiological testing has been curtailed over the past five years with much of the testing outsourced to the private sector. This outsourcing has resulted in a tripling of cost to the DEQ. Bringing this testing back "in-house" permits cost avoidance and the infrastructure flexibility to adequately monitor Utah's radioactive waste industry.

4. **Mechanical Rooms -** All HVAC, mechanical, electrical and other infrastructure utilities are required to be included in this stand-alone building. Telephone/data and other utility equipment rooms are also to be included to serve the facility.

5. **Unique Design Requirements -** Special design requirements have been, and will continue to be, identified during the programming process. Specialty construction and security will be required for the following spaces: Laboratories working with communicable organisms and lethal agents; hazardous materials storage areas; chemical and medical gas storage areas; ballistic testing areas; and areas involved in motor fuel testing. In addition, a large training facility (approximately 6,000 sq. ft.) will need to be isolated from the main laboratory spaces. The new building will need to be built in a manner that while separating key processes and functions for chain of custody and confidentiality, still allows for the maximum coordination and teamwork between the laboratory workers.

   None of the four State Department Laboratories participating in this proposal has a laboratory training facility, and this deficiency constitutes a critical need. The new laboratory training facility mentioned above will serve four functions: First, training of the laboratory's employees on emerging risks, evolving technologies and the most current lab practices; second, training response partners on the skills needed in an emergency, such as a chemical or biological attack (e.g., police, fire, public health personnel); third, as an overflow or "surge capacity" facility offering additional laboratory testing

space; and fourth, as an Alternate Emergency Coordination Center. The space occupied by Utah's Forensic Crime laboratories was not designed to house a laboratory nor was it equipped to deal with laboratory plant facilities such as HVAC, fire suppression, health and safety issues, work flow and ease of customer access. The state Forensic Crime lab services 300 federal, state and local agencies, and task forces, processes and analyses more than 27,000 pieces of high value criminal evidence collected at crime scenes every year and presents expert testimony in court as to that analysis. The overhead costs of training, equipment, instrumentation and the time it takes to process and analyze a piece of evidence is very high, and the limited resources available dictate that the laboratory must function extremely efficiently. In addition, all work as it relates to work product ends up litigated in a court of law therefore quality processes and outcomes are paramount in everything done in this laboratory. The DPS Forensic Crime laboratory has spent thousands of hours and dollars to become an accredited laboratory, one of the challenges the DPS lab faced years ago was a facility that was barley good enough in many plant, records management and safety areas. Currently with increased demands and workload those challenges have grown and now the DPS lab has faced failure to pass ongoing accreditation audits due to those deficiencies. Having the proper environment and facility goes far to support quality outcomes, and the current crime laboratories not only fail to fully support quality through facility design but hinder it's attainment as well. The new facility must address these issues, foster a strong and safe criminal evidence handling environment, and provide for anticipated growth in the future.

6. **Planning/Programming** - This project is an unprecedented collaboration between four state Departments to pool resources, ideas, needs and potentially costs to create a state-of-the-art dedicated facility that will be built from the design phase up to meet the unique needs of the laboratories of Utah's State government. Additionally, the DOH has been coordinating with DFCM over the past year to complete engineering and safety assessments of the current public health laboratory building.

7. **Site and Infrastructure -** Based upon the physical space needs of the USL (approximately 165,000 gross square feet), the facility requires a land parcel of approximately 4 acres (range 3-5 acres). Parcels of land currently owned by the State of Utah are being considered to defray costs. Five sites meeting the above criteria and possessing the required utility infrastructure and have been found:

    1. North Temple Site #1 (between current DOH and DAF)
    2. North Temple Site #2 (near current DEQ)
    3. University of Utah Research Park
    4. Calvin Rampton Site (near current Crime Laboratory in Salt Lake City)
    5. Proposed Technology Park @ 7200 South 700 west

    Aside from meeting required space needs, the new Unified State Laboratory site must be able to provide an easily defensible security perimeter and regulated parking---issues currently unsatisfactory at all four Department's laboratories. The site location should have adequate access to the interstate, as the Metrology Laboratory has large capacity trucks that need to access the facility.

Agency/Institutions Total Project Space (Gross Square Feet):		**164,562**
Department of Agriculture and Food	Chemistry Lab	13,800
	Motor Fuels Lab	1,500
	Metrology Lab	2,500
	Seed Lab	1,500
	Lab Director's Office	1,200
Department of Health (Lead Agency) **(1)**	Microbiology Lab	12,050
	Chemistry/Radiological Lab	14,540
	Forensic Toxicology Lab	5,570
	Laboratory Improvements	6,190
	Management Services	3,715
	Lab Director's Office	1,200
Office of the Medical Examiner	Laboratory & Examination Spaces	21,000
Department of Public Safety	Forensic Biology Lab	7,500
	Forensic Chemistry Lab	7,500
	Impression Evidence Lab	7,500
	Crime Scene Investigation Lab	2,750
	Firearms & Tool Marks Lab	2,750
Office/Admin/Workstations	72 FTE's + Support Space	5,760
Training/Expansion Lab		6,000
Conference Rooms/Amenity Spaces		5,000
Building Support/Loading + Receiving Dock/Services		6,476
General Building Circulation		13,600
Mechanical/Electrical/Telecom		14,960

(1) Department of Environmental Quality laboratory services are conducted by the Department of Health and space requirements for environmental sample testing is included in the Department of Health gross square footage estimates.

Comparative Facilities:

- Arizona State Laboratory – Phoenix, Arizona
- The Virginia Division of Consolidated Laboratory Services (DCLS) – Richmond, Virginia
- Minnesota Department of Health; MDA/MDH Laboratory Building – St. Paul, Minnesota
- Colorado Department of Public Health & Environment; Laboratory Services Division – Denver, Colorado

Consultant Deliverables:

- Complete Planning & Programming document per DFCM Design Manual, including;
    - Organizing project Working Committees for each agency
    - Organizing project Steering Committee (Decision Committee) comprised of representatives from each agency
- Evaluation of proposed sites w/recommendation. <u>All site evaluations must account for future expansion of 20%.</u>
- Evaluation of LEED-NC certification levels, using the State of Utah Energy Efficiency program as the baseline. The agency's desire a VERY energy efficient building.

Project Timeline:

- May 2006 – September 2006 Planning & Programming
    - August 2006 Final Project Budgets
    - September 2006 Final Program

ANTICIPATED

- March 2007 Project Funded
- June 2007 Start of Design
- April 2008 Start of Construction
- October 2009 Occupancy/Construction Complete

EXISTING FACILITIES

1. The laboratories of the Department of Agriculture and Food (DAF) are currently co-located with the administrative offices for the Department. As the existing building was designed as administrative space not laboratory space, the following problems have arisen: Persistent and costly HVAC deficiencies, the inability to retain/obtain accreditation (see below), health hazards to office staff, the inability to expand testing as needed with population increases, and the inability to meet the testing needs of regulated industries.

2. Utah's Public Health Laboratory (DOH), also known as the Russell S. Fraser Laboratory Services Building, (Fraser Lab) was constructed in 1972 and houses the State of Utah's main clinical and environmental laboratories. The Fraser Lab serves all state agencies as well as the Office of the Medical Examiner (OME). In the 15 years following construction, the laboratory served commendably as a comprehensive facility capable of providing chemical, microbiological and toxicological testing. However, by 1987 it was clear that the facility was no longer able to meet current and projected needs and the first of three proposals to build a new laboratory was drafted. The building proposal was presented to the building board in 1988, but the new construction was not approved. The second proposal for a new laboratory was drafted in 1995 after the Fraser lab reached its safe workload capacity. This proposal included a plan to co-locate the public health laboratories with the DAF laboratories. Again, the new laboratory building proposal was not funded. Over the ensuing 10 years (i.e., from 1995 to the present) the Fraser lab's workload increased 59%. In addition, the events of September 11, 2001 and the anthrax attacks that followed, added significant workload and instrumentation requirements to an already overburdened facility. The confluence of these issues created several significant problems: 1.) The new equipment placed significant burdens on an already overtaxed ventilation system resulting in airborne threats to employee safety; 2.) Due to a critical shortage of space, tests important to public health had to be abandoned to make way for "more important" terrorism related testing; and 3.) As test volume increased and new bioterrorism/chemical terrorism tests were added, employee welfare was negatively impacted due to overcrowding.

In addition to a severe lack of space, the Fraser lab itself is beyond its useable work life. In FY 2005, DFCM and the Department of Health (DOH) commissioned WHW Engineering Inc. to conduct a site survey of the existing laboratory building to determine the causes and potential remedies of several environmental and safety concerns.

The WHW Engineering survey quoted above focused primarily on the building's mechanical system deficiencies including: heating, ventilating, air-conditioning equipment and functionality; lab hoods and associated exhaust systems; plumbing and piping systems; associated code problems and occupant temperature control.

According to DFCM, other significant building deficiencies that still need to be addressed to bring the building to proper standards include the following:

- Structural Upgrades
- ADA/Accessibility
- Building Exterior
- Fire/Life Safety
- Health
- Interior Finish Systems.

A copy of this report will be made available to the successful programming consultant upon request.

3. The Office of the Medical Examiner (OME) requires specialized space for its morgue operations and general office space for the administrative functions. Currently the OME's two-story, 16,500 square foot facility, provides a distinct separation between administrative and morgue operation areas. The current facility was completed and first occupied in 1991. The facility is currently adequate for the OME's needs but will be unable to accommodate future growth. Within five years it is estimated that space limitations will be severe and these limitations will be critical in ten years.

4. The Department of Public Safety's (DPS) existing facility (Calvin Rampton Building) is, was, and will be in the future a state office building. The best efforts to create laboratory space in this office building have produced a laboratory that is deficient in a number of key areas including employee safety, work-flow processes and customer service. As work has been attempted to correct or improve these deficiencies, wildly disproportionate costs for the type of improvement being proposed have been experienced. The scale of these costs is due to each proposed change requiring a complete refit or redesign of the facility. The point of diminishing returns was reached long ago as regards addressing these deficiencies, and the only way to adequately correct these deficiencies is to create a new dedicated facility built to laboratory standards.

Should this, the third proposal for a new laboratory, be funded, the disposition of the existing laboratory facilities will be as follows:

- Agriculture Laboratories: Converted back to State office space to be utilized by the DAF.
- Public Health Laboratory: Offered to the University of Utah.
- Office of the Medical Examiner: Offered to the University of Utah.
- Crime Laboratories: Convert to State office space to be utilized by the DPS.

EXISTING BUILDING DEFICIENCIES AND LIFE SAFETY CONCERNS

1. **Department of Agriculture and Food Laboratories** - The current laboratory design is clearly inadequate, both for today's laboratory equipment as well as current and projected workloads. Specific documented problems are as follows:

    - Persistent environmental factors (e.g., temperature, humidity) routinely hinder sophisticated laboratory equipment.

    - Severe space limitations prevent efficient laboratory workflow (e.g., the Food and Drug Administration mandated in 2005 that no more than two microbiologists may perform tests simultaneously due to limited counter space; this limitation prevents the timely performance and reporting of tests results).

    - Incidental exposure of administrative personnel exists with the current facility; numerous incidents have been documented of water and hazardous chemicals leaking on administrative areas in floors below laboratory spaces.

    - Emergency wash stations have no floor drains as required by code.

    - The building exhaust system is inadequate and is unable to provide sufficient airflow to exhaust fumes from fume hoods and testing areas. This deficiency results in contamination of non-laboratory spaces. In addition, the Motor Fuel laboratory exhausts its combustion products into the sewer system and has an inadequate HVAC system. These deficiencies continue to prevent national certification for the motor fuel laboratory.

    - The Metrology Laboratory has severe space limitations preventing simultaneous handling of large mass weights and volumetric "provers". In addition, this facility has no mechanized method for handling weights, posing ergonomic and "drop risks" to workers required to manually move weights weighing up to 1,000 pounds.

2. **Fraser Laboratory Facility** - The current Fraser Laboratory Building's design is clearly inadequate for both today's laboratory equipment and new and growing workloads. With the advent of new terrorism threats, the laboratory requirements for the testing of and temporary storage of possible organisms has grown quickly and steadily over the past four years. The current building is too small resulting in equipment and storage containers being squeezed into existing lab areas. The WHW Engineering study of January 2005 sited earlier in this document notes the following deficiencies:

    - The building exhaust system is inadequate, particularly for the fume hoods. None of the fume hoods receive adequate airflow to fully exhaust fumes created during testing. This engineering study has documented contamination of workspaces from inadequate ventilation. In addition, not all fume hoods are vented to the outside, as is the current standard for laboratory construction.

    - The building air handling supply system including air-handling units, mixing boxes, ductwork, fresh air etc. is inadequate and should be replaced. Additional fresh air is required for the proper and safe operation of the ventilation and exhaust systems.

    - Much of the culinary hot water piping leaks. The current installation is in violation of code in multiple sites where it runs above electrical panels. In addition, the de-ionized water piping is leaking and corroding adjacent structures and must be replaced.

- The steam supply for the auto-claves is unreliable and needs to be replaced with a dedicated generator. (The auto-claves are used to sterilize the equipment used in tests ranging from tuberculosis to HIV. If the steam is neither hot enough nor available for the requisite amount of time, these bacteria or agents could spread though the lab.)

- The building air intake is at ground level. An Industrial Health Incorporated (IHI) study of January 2005 documents that fumes from traffic, insecticides, ground treatments and other sources are drawn into the lab through the intake and distributed throughout the building. The intake must be relocated and upsized to meet building requirements.

- Most of the HVAC equipment is 30+ years old, past ASHRAE's recommended service life and should be replaced.

- The BL3 (Biological Level 3) laboratory should be relocated and totally isolated in terms of location and air systems. (The BL3 lab is where the most toxic and hazardous agents are tested.) The existing BL3 lab is too small for safe work when more than one activity is taking place simultaneously.

- The under floor dilution tank located in the mechanical room is introducing moisture and high humidity into the room creating an atmosphere where steel piping, pumps, air handling units, etc. are corroding.

- Not all laboratory rooms are equipped with a hand basin used only for the purpose of washing hands. Currently, contaminated sinks are being used for this, which is in violation of current laboratory construction codes.

- Storage space, especially in laboratory areas, is severely limited. As a result of these space limitations, hallways and fume hoods are being used to store equipment, supplies and testing materials. In addition, chemicals are being stored in areas not designed for this purpose.

- Laboratory benches are not large enough for modern instrumentation and severe shortages of administrative space results in clerical work being done in laboratory spaces further compromising available testing space.

3. **Office of the Medical Examiner** - The current facility is at capacity and is unable to accommodate projected growth in case volume and staffing. Workflow patterns are inefficient and cannot accommodate the 9% growth in volume that has occurred each year for the past five years and is anticipated to continue at the same rate. HVAC problems have recently been improved but not completely resolved as evidenced by continued fluctuations in temperature and odor diffusion difficulties.

4. **Department of Public Safety Facility** – The current crime lab is housed in the Rampton building. This building was retrofitted from an office design to house the crime lab. There are 16 major deficiencies in this retrofit design that limit or degrade the ability to accomplish the assigned mission. The following is a brief synopsis of the problems.

    - HVAC is inadequate for the cooling, air quality, air pressure and laboratory safety standards recognized by our industry.

    - Emergency safety systems are unavailable in 50% of the labs.

    - Fire suppression is water based. This method of fighting a fire would destroy equipment, test areas and most importantly, irreplaceable evidence and records.

- Security needs are inadequate for crime lab evidence and people housed at the lab.
- Lack of employee locker facilities creates the potential for cross contamination of evidentiary specimens.
- Air ducting is substandard. Ducting of contaminated air does not meet standards.
- Office space and lab space are co-located. These areas need to be separated for quality control purposes.
- On site file storage is limited. Files are sent to State Archives where they have been misplaced or are unavailable in a timely manner.
- Chain of Evidence is required in every aspect of crime lab work. With the current retrofitted design this is cumbersome and time consuming.
- Contaminated evidence does not have a clean controlled environment for preliminary review with police and prosecutors.
- Training space is unavailable for training our customers, partners and employees.
- Crime scene reconstruction is not available. Airport hangers have been used in the past.
- Large evidence, such as vehicles, dumpsters, and containers cannot be processed.
- Light intensity cannot be controlled for alternate light testing of evidence.
- Effectiveness of highly sensitive equipment such as the Scanning Electron Microscope is degraded due to structural deficiencies.
- Customer service/safety is degraded. Evidence such as severed body parts, dangerous drugs and chemicals, firearms, arson case accelerants, spent explosives and unknown items or substances are delivered through areas open to the public.
- The DPS Forensic Crime Lab is a nationally accredited laboratory and as such undergoes ongoing outside audits of facilities, processes and quality. Facility deficiencies have been and continue to be an audit failure and a threat to National Accredited Laboratory status

ESSENTIAL PROGRAM GROWTH REQUIREMENTS.

Population projections for the State of Utah predict a 30% growth rate per decade for the foreseeable future. As a result of this population growth, parallel increases can be expected in crime, food testing needs, and public/environmental testing requirements. Recent observed growth rates in laboratory testing at the involved facilities are as follows:

- The Dept. of Agriculture has seen 5% yearly increases in ground water testing and 15% increases in motor fuel testing over the past several years. In addition, it has new mandates to begin testing of "in-scanning" devices (those devices that determine point of sale pricing in stores) and "wheel load weighers" for local and state law enforcement agencies. The Department will be unable to meet these new mandates without a significant increase in laboratory space.

- The Fraser Public Health Laboratory has seen testing volume increases of 120% in the Newborn screening section over the past eight years, 59% in the chemistry and microbiology sections over the past five years and 7% yearly in the forensic toxicology section over the past seven years. Projected population growth is estimated to continue these increases in testing requirements. In addition, the Fraser laboratory has plans to become the "Level One" chemical terrorism laboratory for the intermountain west region and to obtain certification for its Toxicology laboratory by the American Society of Crime Laboratory Directors (something the current laboratories are unable to do because of space and security issues).

- The Medical Examiner has had a documented growth rate of 9% each year for the past five years and anticipates 8-10% growth rates for the foreseeable future.

- Public Safety laboratories process over 27,000 specimens per year and serve over 300 federal, state and local agencies and task forces. Current estimates reveal a deficit in testing abilities of approximately 300 percent (i.e., approximately 100,000 specimens are brought to the laboratory each year, of which only 27,000 are able to be tested due to facility limitations). A new facility will allow full testing of current specimens and will provide the ability to meet a projected 30% increase in testing needs over the next decade.

- All laboratories within the domain of the four Departments collaborating on this project are at or above capacity and are requesting an increase in space.

- In conclusion, all participating Departments now have requirements that demand more space and a different kind of space than when each of their laboratories was originally built. In fact, much of the testing now done goes well beyond program growth and is best described as program progression and technology advancement.

COST EFFECTIVENESS

Several states within the U.S. have created Unified Laboratories. The financial benefits they have experienced by creating a Unified State Laboratory system can be divided into five main areas as outlined below. Utah expects to obtain similar financial benefits.

- Facility Specific Savings:
  - Shared physical spaces
    - Training labs
    - Library(s)
    - Conference rooms
    - Storage spaces
    - Lunch rooms
    - Restrooms
    - IT support facilities
    - Hazmat spaces
    - Shipping/receiving/parking
  - Shared operations/functions/systems
    - Computer network
    - Internal/external security systems
    - Building/grounds contracts
    - Accreditation/Certification costs
  - Construction and maintenance cost reductions (e.g., single HVAC system)
  - Single, vice several, architectural/engineering/construction contracts

- Expected Personnel Savings:
  - Shared shipping & receiving staff
  - Shared specimen processing staff
  - Shared reception staff
  - Shared security staff

- Workflow Improvements:
  - Shipping costs reduced (e.g., crime lab specimens "walked" to OME lab)
  - Reduction in reporting time of test results
  - Improved chain of custody

- Shared Equipment/Processes:
  - Major Equipment (cost > $20,000)
    - Mass spectrometers
    - Spectrophotometers
    - Chromatographs
    - Colorimetric analyzers
    - Polymerase chain reaction (PCR) processing equipment
  - Minor Equipment (cost < $20,000)
    - Autoclaves
    - Centrifuges
    - Water baths
    - Incubators
    - Non-dedicated refrigerators/freezer

- Shared Expertise/Consultation Skills
  - Peer to peer technical assistance
  - Program collaboration
  - Cross discipline communication
  - Multi-agency grant opportunities

IMPROVED PROGRAM EFFECTIVENESS AND/OR CAPACITY

The rapid advancement in science and technology guarantees new laboratory programs will be needed to support the public and serve the needs of the growing population of Utah. An expanded, improved Unified State Laboratory will, first and foremost, allow all four collaborating Departments involved to meet the present need. With an improved facility, performance standards not presently met for accrediting bodies will be rectified, and accreditation issues for Forensic Toxicology and the Department of Agriculture will be resolved. In addition, the Fraser Lab will have the opportunity of applying to become a Level 1 Chemical Terrorism facility. This designation would allow Utah to serve as the chemical terrorism reference laboratory for the six-state intermountain region and provide greater access to significant federal funding.

Efficiencies can be found in equipment usage between agencies, as complicated pieces of laboratory equipment (e.g. mass spectrometers, chromatographs, colorimeters) can be shared to conduct multiple tests, and hours of operation can be expanded. The new, unified laboratory will enhance laboratory testing capabilities and will allow all laboratories to better fulfill their roles of teaching and training partners. With more room to accommodate partners, the USL will function as a center for training and collaborative endeavors with other partners and agencies. The co-location will improve Utah's ability to successfully complete for Homeland Security, Centers for Disease Control and Prevention and National Institute's of Health projects and grants.

Finally, a unified, expanded facility will fill the present need for surge capacity. In the event of an emergency- natural, manmade or terrorism- additional space and testing capacity will be required. None of the existing facilities can meet this need.

SUPPORT TO CRITICAL STATE PROGRAMS AND INITIATIVES

1. **The Department of Agriculture and Food's Laboratories**

   - Chemistry/Bacteriology Labs – These are the only Utah laboratories certified to serve the dairy industry, including dairy producers and processors. Federal law requires that all milk be tested for antibiotic residues and bacteria prior to processing by a federally certified laboratory. It also requires that an annual test be conducted on raw milk supplies for pesticide residues from each milk source. This testing allows producers and manufactures to market dairy products in interstate commerce.

   - Metrology Lab – The metrology program impacts all Utah consumers and industry involved in commerce. Utah Highway Patrol scales, used for law enforcement, are tested in this lab. Any weighing or measuring devices used in commerce are subject to inspection and certification to ensure that equity prevails for both the buyer and seller. The laboratory cannot obtain national certification due to HVAC system inadequacies and this is the only laboratory that can provide this service.

2. **The Fraser Laboratory** – This laboratory is the only public health laboratory in the state. As such, it is the only facility that can provide vital testing to both local and State public health officials. Its core activities include the following:

   - Identification of existing and new disease agents and environmental threats.

   - Identification of biological and chemical agents used in terrorist activities.

   - Monitoring and screening for diseases within Utah.

   - Conduct training and assure quality testing at 1,237 clinical laboratories in Utah covered by the State's regulatory responsibilities.

   - Conduct forensic testing and expert testimony to support law enforcement and medical examiner activities.

   - Screening of all newborns in Utah for 32 diseases.

   - Conducts analyses of soil, groundwater, and surface water environmental samples to ascertain compliance with state and federal requirements for air quality, drinking water, water quality, and solid, hazardous, radioactive waste.

3. **Office of the Medical Examiner** - The OME plays an important role in monitoring the health of the state's population. Issues as widely diverse as injury and violence, infectious disease outbreaks, criminal activity, occupational safety and medical misadventure are all addressed by the work of the OME. The results of OME investigations and autopsies are utilized by many local, state and federal agencies to ensure the public's health and to support criminal justice activities.

4. **<u>The Department of Public Safety</u>** – The DPS laboratory system is the only full service Forensic Crime Laboratory in the state of Utah. All enforcement and prosecution agencies depend completely on the services of the state Forensic Crime Lab for forensic investigative support. It's core activities include the following:

   - The DPS Forensic Crime Laboratory directly supports Utah's Homeland Security programs. All state, local, federal, private and commercial infrastructure protection and economic recovery processes depend on this connection with the Forensic Crime Laboratory.

   - Skills and expertise in laboratory disciplines are difficult to obtain and in most cases impossible to maintain over time especially for local agencies. A critical role of the State Crime Lab is to provide this expertise to local agencies.

   - The DPS laboratory supports the base activities of every prosecution authority in Utah which includes the Attorney's General, all 29 County attorneys, the Salt Lake County District Attorney, all City Prosecutors, Justice Court prosecutors, all appellate attorneys, the United States Attorney's office and special prosecution authorities.

   - The DPS Forensic Crime Lab solves crimes, identifies suspects, protects the innocent and never forgets the victims, by always looking for new ways to solve both current and dated crimes.

   - The DPS Forensic Crime Lab prevents crime by identifying links to criminals and criminal activity.